

Q8 that an axis of the pump is farther from the product outlet element than is the axis of the body.

#### REMARKS

Favorable reconsideration of the present application is respectfully requested.

Claim 11 has been canceled, and the "offset" feature thereof has been introduced into Claim 1, together with additional limitations as set forth below. Similar features are found in new claims 29 and 30. Claims 1-10 and 12-30 are active in the application.

Claims 1, 2, 3, 8-13, 17, 18, 21 and 28 have been rejected based upon the prior art. Claims 4, 14 through 16, 19, 20, 22, 23 and 27 have been indicated as being allowable if rewritten in independent form (and Claims 5-7, 17, 18 and 24-26 would also presumably be allowable if rewritten in independent form, subject to overcoming rejections based on 35 U.S.C. §112). Claims 4, 5, 14, 22 and 23 have therefore been rewritten in independent form.

According to a feature of the invention, in a unit for packaging and dispensing a liquid or semi-liquid product, the product outlet element is held substantially immovably in position on a fixed portion of the body of the unit. This fixed mounting of the outlet element, coupled with the flexible conduit, prevents the movement of the actuating element from affecting the spray position or orientation of the product.

For example, according to the non-limiting embodiment of the figures, a push-button 34 acts as an actuating element for actuating the pump 30. It is mounted to the stem 33 of the pump and so moves with the depression of the stem to actuate the pump. But the outlet nozzle 9 is held in a fixed position and is connected to the pump (e.g., via the actuating element) by way of the flexible conduit 41. Therefore, when the push-button 34 is depressed (Figure 3B), the conduit flexes and the position or orientation of the outlet nozzle 9 is

unaffected.

While this construction desirably assures a more accurate spray of the product, it introduces a further problem. The flexible conduit must flex each time that the pump is actuated. This means that there is a risk of early failure of the device due to fatigue of the material of the conduit 41 which must repeatedly flex.

Claim 11 had recited that the pump is offset from the axis of the body, and this has now been more clearly set forth in Claim 1 which recites that the pump is offset relative to an axis of the body *and in a direction such that an axis of the pump is farther from the product outlet element than is the axis of the body*. This feature, which is also recited in new Claims 29 and 30, is clearly shown in Figure 3A.

As those skilled in the art can well appreciate, this offset will tend to reduce the rate of fatigue failure of the pump head. Given a certain vertical stroke length of the actuating element 34 for the actuation of the pump, the angle by which the flexible conduit must flex is inversely proportional to the spacing of the moving actuation element 34 from the fixed nozzle 9: a greater spacing requires a smaller angle of flexure of the conduit 41 during the stroke and so produces less fatigue in the material of the conduit 41. Therefore, by offsetting the pump in the manner now set forth in Claim 1, the spacing is increased and the possibility of fatigue failure of the conduit is reduced.

Claims 1, 3, 9 and 11 through 13 were rejected under 35 U.S.C. §102 as being anticipated by the U.S. patent to Freitas. However, Applicant respectfully submits that Freitas fails to disclose the presently claimed feature set forth above.

Freitas discloses a liquid dispensing device such as a "thermos" jug having an insulated liquid reservoir. A pouring spout 15 is fixedly mounted within the protuberance 18 of a fixed external cover 32 which is mounted on the reservoir. The pouring spout 15 is

fluidically connected to a coupling 27 of a push-button 24 via a flexible pipe 19 so that liquid in the reservoir can be pumped to the spout via a passage extending through the push-button and the flexible pipe.

As the Examiner has recognized, the pump and push-button 24 of this reference are offset relative to the axis of the reservoir. But the offset in Freitas is in a sense *opposite* to that now recited; the pump and push-button 24 are there offset *towards* the dispensing element relative to the axis of the reservoir (see Figure 1 of the reference).

This evidently is not a problem in Freitas. Indeed, Freitas uses a piece 29A to pinch the conduit 19 closed when the push-button is not depressed. But this requires that the conduit of Freitas be separately formed of a soft material having the ability to withstand such deformations, which increases the cost of the pump. In contrast the flexible conduit of the invention may be inexpensively molded together with the actuating element and the housing of the nozzle (although this is not a requirement of the invention).

Claim 1 (and the new claims) therefore recites a feature which is *contrary to* the teachings of the prior art to Freitas and provides improved results as compared to the prior art. Claim 1 and its dependent claims, and the new claims, are therefore believed to be clearly patentable.

As for paragraphs 12 through 15 of the Office Action, the secondary references to Andris, Clements, Gueret and Brattoli et al were cited for teaching features specific to several of the dependent claims, and provide no teachings for overcoming the shortcomings of Freitas with respect to amended independent Claim 1. The claims are therefore believed to define over any combination of the above references.

Concerning the rejections based upon 35 U.S.C. §112, first paragraph (paragraphs 5 and 6 of the Office Action), it is noted that the term "self-tightening" is defined at the bottom

of page 6 of the specification, i.e., it may be that obtained by axial grooves arranged on the external surface of the body and/or on the internal surface of the shell. As to Claims 24 through 26, Claim 24 merely recites that the at least two sealing zones comprise a first sealing zone formed by at least one catch engagement bead and a second sealing zone formed by the self-tightening mounting. As noted above, the self-tightening mounting is defined in the specification as comprising axial grooves on the body or shell. The at least one catch engagement bead is described at the bottom full paragraph of page 7 ("a first sealing zone may be obtained by at least one catch engagement bead").

As for the rejection of Claims 5 through 7 (paragraph 6), Claim 5 merely recites that the outlet element (e.g., 9) is mounted inside a housing (e.g., "housing 44") communicating with the conduit (e.g., 41) forming the flexible connection, and that the actuating element (e.g., 34) of the housing 44 and the flexible conduit 41 form a single molded part. The construction of elements 34, 41 and 44 from a single molded part is clearly evident from the figures. As to how "two elements that should be non-flexible" can be "part of a single molded unit with a flexible member," this can be accomplished by forming the flexible member from a thinner material (Figure 3B) or with a bellows construction (Figure 4).

Applicant respectfully submits, in view of the above discussion, that there is adequate disclosure in the originally filed specification to support the subject matter of Claims 5 through 7, 18 and 24 through 26, and so respectfully submits that the rejection under 35 U.S.C. §112, first paragraph, should be withdrawn.

Concerning paragraph 1 of the Office Action, as to point "a", the lead line for reference numeral 31 in Figure 3A does in fact point to the annular intermediate component, i.e., that onto which the free edge of the pump 30 is crimped; see attached copy of Figure 3A with lead line highlighted in red. As to point 1b, the stopper 24 is described as having an

axial part 25 and a transverse side 26 (see sentence bridging pages 9 and 10). The reference numeral 26 does indeed point to this transverse side; see highlighted lead line in attached copy of Figure 3A. As to point 1c, see highlighted lead line in attached Figure 3A. As to point 3d, the lead line for element 30 is directed to the pump, both in Figure 2 and in Figures 3 and 4.

The specification has been revised in light of paragraph 2 of the Office Action.

With respect to paragraph 3 of the Office Action, it is noted that the at least two sealing zones had already been recited in Claim 23.

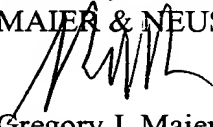
With respect to paragraph 8 of the Office Action, the dependency of Claim 17 has been corrected.

The Examiner's attention is respectfully directed to the co-pending related U.S. Patent Application Serial No. 09/153,891.

Applicant therefore believes that the present application is in a condition for allowance and respectfully solicits an early Notice of Allowability.

Respectfully submitted,

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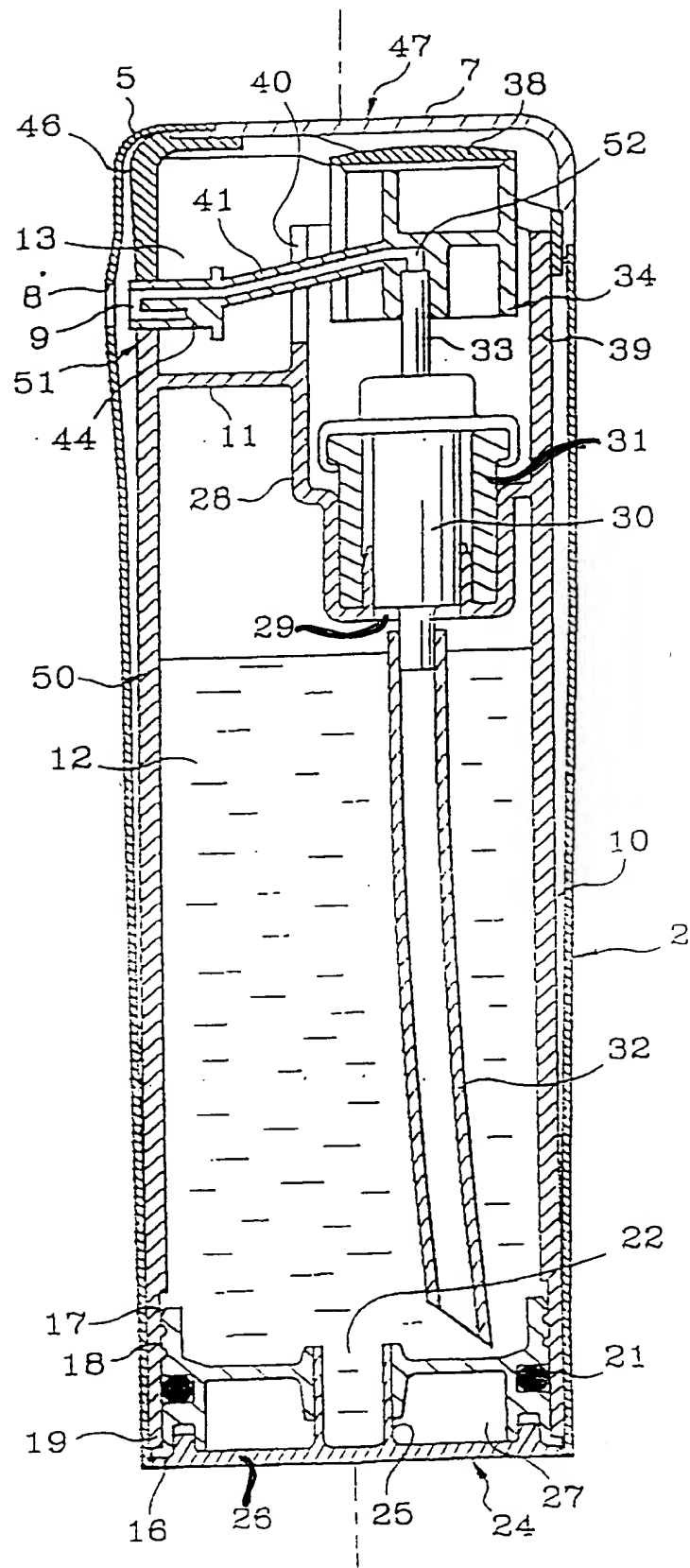


FIG. 3A